Amendments to the claims:

1-22. (Formerly Canceled in earlier response.)

23. (Formerly presented) A multiple modulus conversion (MMC) method for obtaining a plurality of index values associated with a plurality of moduli, for use in a communication system configured to map frames of information bits onto predetermined communication signal parameters, the method comprising:

obtaining an input Q_0;

representing the input as a plurality of sub-quotients in the form of $Q_0 = Q_{0,0} + Q_{0,1}*B^{n(0)} + \ldots + Q_{0,k}*B^{n(0)+n(1)+..n(k-1)}$, where $Q_{0,j}$ is the j^{th} sub-quotient of the input, B is the base numbering system, n(j) is the number of digits assigned for the j^{th} sub-quotient, and k+1 is the number of sub-quotients, for j=[0,k];

obtaining a multiplicand C_i, that is an estimate of the inverse of a whole number Y_i, where Y_i is one of the moduli;

performing an inverse modulus multiplication operation by:

calculating at least one sub-quotient of the output pseudo-quotient corresponding to Y_i according to the following formula: $Q_{i,j} = ((Q_{i-1,j}+R_{i,j+1}*B^{n(j)})*C_i)>>N_3$, where $Q_{i-1,j}$ is one of a sub-quotient from a previous calculation and a sub-quotient of the input, $R_{i,j+1}$ is the pseudo-remainder from a previous calculation, and N_3 is the number of digits used to represent C_i; and

calculating a pseudo-remainder according to the following formula: $R_{i,j}=(Q_{i-1,j}+R_{i,j+1}*B^{n(j)})-(Q_{i,j}*Y_i)$; and

determining an index value associated with the modulus Y_i, the index value being responsive to the inverse modulus multiplication operation.

24. (Formerly presented) A method according to Claim 23, wherein C_i is estimated according to the formula: $C_i = \text{floor}(B^{N3}/Y_i)$, where the floor function returns the largest integer less than its argument.

25. (Formerly presented) A method according to Claim 23, wherein C_i is estimated according to the formula: $C_i = ceil(B^{N3}/Y_i)$, where the ceil function returns the smallest integer greater than its argument.

26. (Formerly presented) A method according to Claim 23, wherein C_i is estimated according to the formula: $C_i = rnd(B^{N3}/Y_i)$, where the rnd function returns the closest integer to its argument.

27. (Formerly presented) A method according to Claim 23, wherein the index value is determined by:

obtaining a final pseudo-remainder $R_{i,0}$ associated with a least significant sub-quotient $Q_{i,0}$; and

performing a final pseudo-remainder correction loop, wherein the value Y_i is repeatedly added to $R_{i,0}$ until the result is in the range $[0,Y_i)$.

28. (Formerly presented) A method according to Claim 23, wherein the index value is determined by:

obtaining a final pseudo-remainder $R_{i,0}$ associated with a least significant sub-quotient $Q_{i,0}$; and

performing a final pseudo-remainder correction loop, wherein the value Y_i is repeatedly subtracted to $R_{i,0}$ until the result is in the range $[0,Y_i)$.

29. (Formerly presented) A method according to Claim 23, wherein the index value is determined by:

obtaining a final pseudo-remainder $R_{i,0}$ associated with a least significant sub-quotient $Q_{i,0}$; and

performing a final pseudo-remainder correction loop, wherein the value Y_i is alternately added and subtracted to $R_{i,0}$ until the result is in the range $[0,Y_i)$.

30. (Amended) <u>A multiple modulus conversion (MMC) method for obtaining a plurality of index values associated with a plurality of moduli, for use in a communication system configured</u>

to map frames of information bits onto predetermined communication signal parameters, the method ~~A short word inverse multiplication method for use in multiple modulus conversion (MMC)~~, comprising:

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obtaining an input quotient $Q_{i-1} = Q_{i-1,0} + Q_{i-1,1}*B^{n(0)} + \ldots + Q_{i-1,k}*B^{n(0)+n(1)+\ldots n(k-1)}$, where $Q_{i-1,j}$ is the j^{th} sub-quotient of the input quotient, B is the base of the numbering system, and n(j) is the number of digits assigned for the j^{th} sub-quotient, and k+1 is the total number of sub-quotients in the input quotient;

initializing a pseudo-remainder $R_{i,k+1}$ to 0;

performing an inverse multiplication loop, performed for each sub-quotient starting with $Q_{i-1,k}$ and proceeding one by one to $Q_{i-1,0}$, by the following operations:

calculating the output sub-quotient $Q_{i,j} = ((Q_{i-1,j}+R_{i,j+1}*B^{n(j)})*C_i)>>N_3$, where C_i is an estimate of the inverse of a whole number Y_i, and N_3 is the number of digits used to represent C_i;

calculating the pseudo-remainder $R_{i,j}=(Q_{i-1,j}+R_{i,j+1}*B^{n(j)})-(Q_{i,j}*Y_i)$;

31. (Formerly presented) A method according to claim 30, further comprising:

determining whether the final pseudo-remainder $R_{i,0}$ is in the range $[0,Y_i)$;

performing the following operations when $R_{i,0}$ is not in the range $[0,Y_i)$:

adding or subtracting Y_i from $R_{i,0}$; and

changing the output sub-quotient $Q_{i,0}$ by one.

32. (Formerly presented) A method according to Claim 31, wherein changing includes incrementing and decrementing.

33. (Formerly presented) A method according to claim 30, further comprising:

performing a pseudo-remainder correction loop by:

determining whether the final pseudo-remainder $R_{i,0}$ is in the range $[0,Y_i)$;

exiting the loop if $R_{i,0}$ is in the range $[0,Y_i)$;

performing one of adding and subtracting Y_i from $R_{i,0}$;

performing one of incrementing and decrementing the output sub-quotient $Q_{i,0}$ by one.

34. Cancel Claim 34.

35. (New) A multiple modulus conversion (MMC) method for obtaining a plurality of index values associated with a plurality of moduli, for use in a communication system configured to map frames of information bits onto predetermined communication signal parameters, said method comprising:

obtaining an input;

representing the input as a plurality of sub-quotients;

obtaining a plurality, M, of multiplicands that are estimates of the inverses of the moduli,

performing a short word inverse multiplication method for each of the M multiplicands, wherein the output sub-quotients of each inverse multiplication are used as the input sub-quotients for the next operation;

performing only a final remainder correction loop exclusive of pseudo-remainder adjustments after each multiplication, performed for only ~~for all but~~ the last pseudo-remainder outputs, $R_i = R_{i,0}$, i=[1,M-1], by:

performing an inner correction loop by:

determining whether R_i is within the range $[0,Y_i)$;

exiting the inner loop if R_i is in the range $[0,Y_i)$;

performing one of adding and subtracting Y_i and R_i; and

performing one of incrementing and decrementing R_{i+1} by one; and

determining an index value associated with each modulus, the index values being equal to the corrected remainders R_i, i=[1,M].